BEAVER CREEK BRIDGE
(Kukkala Bridge)
(Bridge No. 9C083)
Spanning Beaver Creek at
Kukkala County Rd. (Rd. 4087)
Clatskanie vicinity
Columbia County
Oregon

HAER No. OR-87

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Columbia Cascades Support Office
National Park Service
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Seattle, Washington 98104-1060

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HISTORIC AMERICAN ENGINEERING RECORD

BEAVER CREEK BRIDGE (No. 9C083)
(Kukkala Bridge)

HAER No. OR-87

Location:	Clatskanie vicinity, Columbia County Kukkala County Road (CR 4087) USGS Clatskanie Quadrangle UTM Coordinates: 5106300mN, 487700mE
Date of Construction:	ca. 1915 (site 1965)
Engineer:	unknown
Builders:	unknown
Present Owners:	Columbia County
Present Use:	Highway Bridge
Significance:	The Beaver Creek (Kukkala) Bridge is significant as a unique example of pony truss bridge construction using a double-intersection Warren configuration. It is the only pony truss in Oregon which utilizes this type of truss configuration. The structure is also significant as an early example of riveted truss construction in Oregon.
Report Prepared by:	James Norman, Cultural Resources Specialist Oregon Department of Transportation
Date:	January 1998

I. DESCRIPTION

The Beaver Creek (Kukkala) Bridge consists of a single 48-foot rivet-connected steel pony truss. The truss span has a deck width of 16.5 feet and carries a single 15-foot travel lane. The truss is built up from riveted plate channel girders with web plates at the bottom chord joints. Some modifications have been made to the structure to strengthen the bridge, with the addition of several short sections of angle-iron to reinforce structural members and failing joints. There is no nameplate on the structure. The bridge is located in an isolated, pastoral setting along a bypassed section of old Highway 30, now Columbia County Road 4087.

II. HISTORIC CONTEXT

The Beaver Creek (Kukkala) Bridge is a unique bridge in Oregon. It is the only pony truss structure in the state which utilizes a double-intersection Warren configuration, and one of the only three truss bridges in the state which use this configuration. The other two structures with double-intersection Warren trusses are the Crooked River (Elliot Lane) Bridge (ca. 1914) and the Siuslaw River (Richardson) Bridge (1912).

III. HISTORY

The Beaver Creek (Kukkala) Bridge was originally constructed about 1915. The original site is unknown, but is believed to have been near the Oregon coast, possible spanning the Nestucca River. The engineer and the builders are unknown. The bridge is one of the state's earliest extant examples of truss bridge technology using riveted steel plates to strengthen the joints. Prior to about 1910, truss bridges were generally built using pin-connected joints, which allowed for easy on-site construction facilitated disassembly for relation to a new site if needed. However, pin connections were not as strong as fixed joints, and increasing traffic loads and volumes made the stronger riveted joints a requirement for most new highway bridges after the earty 1910s.

IV. PROJECT INFORMATION

This documentation was undertaken by the Research Unit of the Environmental Section of the Oregon Department of Transportation as a result of a proposed highway improvement project being undertaken by the Oregon Department of Transportation. The Beaver Creek (Kukkala) Bridge No. 9C083 will be displaced because of substandard structural condition and a demonstrated inadequacy for rehabilitation.

V. SOURCES

Smith, Norman, and Dykman. Historic Highway Bridges of Oregon. Oregon Historic Society Press, Portland 1989.

Hollinger, Samuel — Retired Columbia County Highway Engineer. Personal communication with James Norman.

Norman, James — Request for Determination of Eligibility for the Beaver Creek (Kukkala) Bridge, ODOT, 1996.